THE BOSTON

MEDICAL AND SURGICAL JOURNAL.

VOL. III.] TUESDAY, APRIL 13, 1830. [No. 9.

I.

ON COLD AS A REMEDIAL AGENT.

A Lecture at the Royal Western Hospital.

By JOHN EPPS, M.D.

SIMPLICITY of means, and judgment for their application, seem to be the two essentials to a *scientific* practice of the healing art. By simplicity of means is not meant fewness of remedies, but a clear and proper knowledge of the principles of their uses. The man who talks of curing all diseases by a few remedies, is but a novice in the practice of physic. This is the simplification of the study, not that of the bedside. Every successful and variously employed practitioner knows the necessity of modifying one medicine by the aid of another, and even of several. Disease is not exhibited by a single symptom, but by a complication of symptoms; all of which require to be taken into consideration, and to be met by remedial means. Such being the case, it follows that simplicity of means can refer only to the clearness with which the mind views a morbid state, in reference to the matter suited for its relief. Taking this as the view, it may be justly maintained, that many of the most common gifts of the Creator may be most efficacious remedies, and may act as beneficially as the most rare and valuable natural productions.

The person to whom we are most indebted for the use of COLD as a remedial application, is the late Dr. Currie, of Liverpool, a philosopher whose attention was directed to the subject while studying at Edinburgh, having to prepare an essay on the influence of cold drinks, for a society of which he was a member.

There are different methods under which cold is used as a remedial means. These are cold clothing, cold air, and cold water; these may be applied differently, or modified in different ways. Thus the cold clothing may be of different kinds,—cold flannel, cold linen, cold cotton. The cold air may be breathed into the lungs only, or applied to a part or to the whole of the external surface of the body; the cold water also may be taken internally or applied externally. The extent and the mode of the application may vary,—thus, the water may be applied slowly and partially—slowly and universally—suddenly and partially—suddenly and generally.

In no case is the benefit of cold clothing more commonly experienced, than in the relief of that restlessness which afflicts many individuals in bed so that they cannot sleep. Dr. Franklin recommends, in such a condition of things, to throw off the bed-clothes, walk about the room, and again get into bed. The clothing is cooled, the body is cooled, and a refreshing sleep is the general consequence.

It is in fever, however, that the efficacy of cold clothing is more peculiarly apparent, in the benefit arising from the frequent change of linen and of bed-clothes; a practice of the utmost importance in a remedial point of view, and so grateful, that whenever an opportunity occurs, and as frequently as is consistent with the debility of the patient, the linen should be changed. Cold linen, blankets being commonly used in addition, is preferable; though cotton is best for clothing in our climate.

This method of applying cold may be called "vestatio frigida."

With regard to the application of *cold air*, the method to be adopted is to strip the individual, and allow him to be exposed to the air in the room, or to a current of atmosphere in some open place,—to sit still,—to walk quietly or slowly, as circumstances may dictate. This mode of applying cold has been beneficially employed in some cases of fever. Professor Home cured himself of a febrile affection by this means. The application of cold air may, in cases of fever, be continued as long as grateful; if chilliness come on, the exposure is to cease.

There is one remedial application of cold air highly important, and first noticed by that celebrated surgeon Mr. Pearson, and to which I can add my testimony; it is the benefit of cold air in cases of severe salivation from the use of mercury. I have seen it act almost as a charm.

This medicinal means may be called the "aërated frigida," and is now used in smallpox, a disease in which its use was most violently opposed.

Cold water, however, is the most important method of employing cold as a remedy in disease.

As a general tonic, taken internally, it is one of our best remedies. A glass of cold water taken every morning in small quantities, is very useful in those cases of weak stomach, where languor, a general inactivity and unwillingness to do anything without the stimulus of breakfast, exist.

Soda-water is equally efficacious in relieving the cough connected with irritation and heat at the velum pendulum palati, at the upper part of the pharynx, and of the epiglottis; an individual having it in his power, when cough depends on such a cause, to avoid coughing almost entirely by constantly sipping cold water.

It acts as a diuretic, and is hence used in dropsy; the mechanical notion that, as water exists, in dropsical cases, in excess, no more should be added, being expelled by the improved knowledge of physiology, and by the circumstance that thirst exists in dropsical diseases. The benefit is evidenced by the fact that the water passes to the kidneys, brings these organs into increased action, and thus favors the removal of the effused fluid constituting the dropsy.

Cold water is an excellent sudorific, generally exciting an action on the skin, when taken in *small* but *frequent* doses. Inducing perspiration, it has been introduced as a remedy in fever; and, as thus employed, its praises have been stated by Hippocrates, Galen, and Celsus. Dr. Hancock calls it the "febrifugum magnum." In Spain and Italy, cold water was much employed in fever, forming that part of medical treatment called diæta aquea.

The great Boerhaave, biased by his preconceived opinion, that fever depends on a lentor of the blood, opposed the use of this remedy, preferring warm liquids instead. Van Swieten, his commentator, represents cold water as injurious in most cases of fever. Such, gentlemen, is the influence, the blinding influence, of preconceived opinions. It is one of those seven bandages that every man, according to Owen of New Lanark, has over his eyes.

Dr. Franklin, however, showed the benefit of cold water in fever, by having cured himself of fever by the use of it: he gives an account of the same in his writings.

Dr. Currie has done most for the restoration of this useful remedy to its place, and, it may be added, to its *proper* place, among remedial agents.

Not only have hypotheses, but also the well-established injurious consequences of cold water in certain cases, tended to impede the use of this, remedially. But the triteness of the saying does not diminish from its force,—"abuse is not use." It therefore becomes necessary to discriminate between the circumstances when cold water is useful and when injurious. The following practical rules were laid down by Dr. Currie:—that cold water should not be used in the cold stage of the paroxysm of intermittent fever, since the pulse, by cold drinks, is rendered more frequent, and the coldness is increased;—that it may be used in the hot stage, when that stage is fairly formed, the pulse being thereby lowered, and the heat diminished,—the freedom in the use of the cold water being guided by the ratio in which the heat is advanced beyond the natural standard. According to Alpicius, the disease is frequently put a stop to by the liberal use of cold water. Dr. Currie further maintains, that it may be used in moderation in the *beginning* of the sweating stage, but not after the perspiration has become copious and profuse. Indeed, the general principle for our guide is this: when there is no sense of chilliness present, when the heat of the surface is *steadily* above what is natural, and when there is no general or profuse perspiration, it is proper.

This principle being understood, it will readily be seen that cold drinks may be used more abundantly in continued fever than in the hot stage of intermittents; and the doubt of the ancients regarding the propriety of the use of cold water in intermittents may be readily understood, when it is taken for granted that they did not know the peculiar circumstances to be attended to in the use of this agent.

This application of cold may be called "potatio frigida."

The most important and the most extensively employed form under which water is remedially used, is the application of cold water *externally*. The methods by which this application is made are two,—*slowly* and *suddenly*; the former being called the "lavatio frigida," the latter the "affusio frigida."

The "lavatio frigida" consists in the sponging the body with cold water or with vinegar and water, as circumstances may dictate. Here the application of the water is gradual, and is attended with the most beneficial effects in many cases of fever. Often, in persons laboring under chronic diseases from some cause or other, the bowels become irregular; febrile symptoms come on; the head, face and hands are very hot, and the unpleasant irritation therewith connected becomes a source of great distress to the patient. This may be almost wholly relieved by the sponging *constantly* the parts most affected by heat with cold vinegar and water, or, which I have found still more beneficial, with a solution of muriate of ammonia in water.

In typhous fever, I have seen this plan attended with the greatest success. Dr. Gregory, of Edinburgh, was a warm advocate of the "lavatio frigida" in this fever, finding that even when petechial spots occurred, these formed no obstacle to the use of the remedy.

Superior, however, in medicinal efficacy, to all the modes of applying water, is the "affusio frigida," or the sudden pouring of cold water on the body, or the sudden immersion of the body in cold water.

The cold affusion was first scientifically introduced into practice by Dr. Currie, of Liverpool, the gentleman already noticed, and it was after reading a paper by Dr. Wright, in which the benefits arising from the use of cold water, in certain cases of malignant fever, was conspicuously exhibited, inasmuch as affusion—to the use of which Dr. Wright was led by observing that the pains in his limbs, connected with the fever under which he labored, were relieved, when on deck, in proportion to the coldness of the atmosphere in these cases—was attended with success when all other means had failed.

In the year 1787, a contagious fever appeared in the Liverpool Infirmary. The cold affusion was tried in several cases, and with benefit—indeed with perfect success.

In 1792, the 30th regiment was billeted in Liverpool; the general guard-room belonging to the regiment was ill ventilated and damp; in it some drunken soldiers were confined, and, in consequence, the typhous or gaol fever broke out and spread rapidly. Being arrested by precautionary measures, it was found that fifty-eight soldiers were affected, thirty-two of whom went through the regular course of the fever, and the remaining twenty-six had the disease cut short by the cold affusion. The water of the river Mersey was that used, its temperature being from 58 to 60 deg.

Since this time, the cold affusion has been abundantly and beneficially used in fever; and a striking proof of the benefit connected with the practice is, that the patients, though at first terrified at the thought of having cold water poured upon them, generally express a wish to have the affusion repeated.

It may be proper to notice the circumstances necessary to be attended to in the use of the cold affusion in fever.

The time when the cold affusion is to be used, is when the exacerbation of the fever is at its height, which is generally in the evening; and, used at this time, one particular advantage is gained, namely, that the patient frequently falls into a sound sleep. However, the affusion may be used on any occasion when the heat of the surface is steadily above the natural standard, and when no chilliness is present.

It is not to be used simply because the *patient's feelings* may indicate that he is hotter than natural; the temperature must be ascertained by the thermometer, placed beneath the tongue or in the axilla. This is the only safe criterion by which the heat can be judged of.

The earlier this remedy be used the better; the solution of the fever being generally effected when used even on the second or third day of the fever, and even sometimes on the fourth; though then, if not effecting a solution, always moderating the severity of the disease.

The same remarks apply to the use of the cold affusion as of cold drinks in the treatment of intermittent fever, being had recourse to in the paroxysm, often cutting the disease short. It is necessary, however, to give medicines in the interval. It has sometimes prevented the approach of the paroxysm, when made use of about an hour before the expected return. Hence the practice, in some parts prevailing, of pushing persons affected with ague unexpectedly into a river.

In smallpox it has been used with benefit; an use which prejudice and preconceived opinion have tried every means to gainsay. It has been objected that the cold affusion has a tendency to drive inwards what nature has driven or is endeavoring to drive out. However, it is a well-established fact, that cool air is highly beneficial and grateful to those laboring under smallpox; and consequently it may, perhaps, hence be justly inferred, that the affusion of cold water may be useful. The fact favors the corollary; since, after the cold affusion, the eruptive fever abates; the delirium, if previously existing, subsides; the pulse is slower; the headach is reduced; the sleep is tranquil. It is a fact, moreover, which should ever be borne in mind, that the eruption is proportioned to the fever; and that, consequently, in diminishing the fever, we diminish the eruption.

In confluent smallpox, however, the cold affusion does not seem so useful, especially after the eruption is complete.

In scarlet fever, the cold affusion has been used in cases with much benefit, wine being generally administered after it. The efflorescence, in some examples, did not take place; a circumstance showing that the disease was cut short. No affection of the throat occurred in these cases.

If asked for an explanation as to the reason why the cold affusion produces such decided effects on fever, the answer will consist of this,—that the same is dependent upon the sudden, general, and powerful impression on the sensations, disturbing the morbid connexions, and exhibiting the truth of that principle, first clearly developed by John Hunter, that no two actions can exist at the same time in the system.

The cold affusion has been used in convulsive diseases, and with much benefit.

Among spasmodically convulsive diseases, tetanus, for severity, danger and extent, holds the most prominent place. The principal remedies for this disease are opium, mercury and wine. The cold bath may now be added to the list. Dr. Wright and Mr.

Cochrane used the bath with success in this disease, in the West Indies. Dr. Currie has a high opinion of its power in idiopathic tetanus, that is, not arising from wounds. The patient should be thrown into the water when under a general convulsion. In several cases where opium had failed, as also mercury, the cold bath succeeded, the muscles becoming more relaxed after each plunge. Hippocrates and Barcenna notice the use of the cold affusion in this disease. This remedial agent must be hailed, by every well-wisher to the human race, as one of the highest importance, and likely to place in our power one of the most untractable of diseases.

In insanity, the cold affusion has been used with success, when the most active measures have failed,—the violence of the delirium being abated, and the symptoms being broken in the chain of their occurrence. As illustrative of the benefit arising from this remedial agent, the fact, well known, that many persons, in the delirium of fever, have thrown themselves into the water, and have recovered from fever immediately afterwards, is worthy of notice. Sir John Chardin was cured in this way.

In the hysteric paroxysm, it is a very efficacious remedy, especially with those young ladies who, when they wish to gain any particular point with their papas, have recourse to the paroxysm of hysteria ; the very expectation of the affusion will often prevent the attack of the disease.

In the paroxysm of general convulsion, the cold bath has been used with advantage : the more general the convulsion, the more beneficial is the application of the remedy.

Several cases of obstinate stricture at the neck of the bladder, in which the influence of opium, bleeding or fomentations was not of any avail, have been cured by dashing cold water on the legs.

Such are some of the many uses of this mode of applying cold; uses so important as to rank this very high among remedial measures.

In concluding, the question may be proposed, How does cold produce these beneficial effects ? Cold, by its coldness, may act as a refrigerant directly; and, in this point of view, may do good : but the general influence is dependent upon the effect on the nervous system in giving a shock to the frame, which destroys the succession of morbid phenomena, and thus cuts short the disease. However, it is likely that cold does much more than simply destroy the succession ; it may, in addition, have a peculiar influence upon the nervous system ; but into this subject an opportunity will be afforded of entering hereafter.

With respect to objections to the use of cold in local inflammatory diseases connected with fever, much might be said; but this subject will be entered upon when treating of warmth as a remedial agent.

II.

On the Prophetic Power said to occur before Death in the Brain Fever.

Few practitioners but have met with instances in which the fatal termination of a disease has been predicted by the patient long before any sign of such fatality had exhibited itself. The mind of a man is often deeply and unchangeably impressed with a strong conviction that he is on his death-bed, and that his dissolution is at hand, when nothing but this conviction arouses the apprehension of his medical attendant ; and how often does such apprehension prove well founded. Whether this idea resting on the mind, disarms the system of its power of resisting disease, or whether there is sometimes given to men, just before they enter the world of spirits, a spirit of prophecy, is a question not easily decided. Some interesting observations on this subject, made at a late meeting of the London College of Physicians by Sir Henry Halford, the learned physician and accomplished writer who presides over that body, are recorded in the periodicals of that metropolis.

Sir Henry began his paper by observing that he regarded the description given by Aretæus of the burning fever of Hippocrates,—the brain fever of English authors,—as one of the most interesting specimens of medical literature which had come down to us from antiquity ; remarkable alike for the beauty of the language (Ionic Greek) and the fidelity of the details. It was not to the early stage, similar in its phenomena to other inflammatory diseases, but to its termination, that the author was anxious to direct attention,—a termination ushered in by syncope, followed by cold sweats, and " a loosening of all the bonds by which the human frame is held together."

Aretæus represents the patient as the first to discover his approaching end, and announcing it to his attendants ; as seeming to hold converse with those gone before him, and acquiring a prophetic power in the last moments of existence ; while he attempts to account for this by supposing that the soul, whilst " shifting off this mortal coil," becomes purer and more spiritual, as if its new existence had already commenced. This account of the description of Aretæus was followed by the history of a case which had fallen under the care of the learned President. A young gentleman who had been using mercury, caught cold while under its influence, and became affected with fever. On the seventh day, when Sir Henry was first called in, he was in a state of the highest excitement—threatening those around him, and not to be approached without increasing his irritation to fury. He was put under restraint, and tartarized antimony administered at intervals, in doses of a grain each time. On the eleventh day from the commencement of the attack, he had become quite calm, and to those about him he seemed to be much better. It was observed that he had repeatedly said he should die, and had talked with the utmost composure of his affairs, giving directions for their arrangement. He sent messages to his absent friends, and spoke of a sister recently dead, as one whom he was about immediately to follow. In answer to his interrogations, Sir Henry found that he had not slept anterior to this quietude, and that his pulse was quicker than ever. He then became satisfied that the improvement was but in appearance,—that it was " a lightning before death,"—and that the hours of his patient were numbered. He died that night.

The author next alluded to the case which was related last year, in which a gentleman, laboring under insanity, was put to Shakspeare's test of "rewording" his meaning.* In this case, also, some restoration of the mind took place before death; but, as the case was a chronic one, the phenomena were different,—different as delirium from insanity. The mention of this distinction led the author to allude to the eloquent pleading of Lord Erskine, in defence of Hatfield. "In some cases (said he), perhaps in several, the human mind is stormed in its citadel, and laid prostrate under the stroke of frenzy. These unhappy sufferers, however, are not considered by physicians as maniacs, but to be in a state of delirium from fever. There, indeed, all the ideas are overwhelmed, for reason is not merely disturbed, but driven from her seat. In others, reason is not driven from her seat, but distraction sits down upon it along with her—holds her trembling upon it, and frightens her from her propriety."

Returning to Aretæus and the prophetic power attributed by him to patients under this form of fever, the learned President observed that it did not appear to him necessary to attribute the phenomena to any supernatural influence. We were accustomed to see the mind frequently "clear up" in the last hours of life, especially when this is cut short by diseases which have previously disturbed the intellectual faculties. The mind becoming capable of exercising the most correct judgment when no longer biased by the passions, and the experience of the past giving wisdom to the inferences as to the future; such being a period, according to the lines of Milton,

> "When old experience does attain
> To something of prophetic strain."

The author next entered into a curious and erudite discussion, in which he displayed great ingenuity and research. The object was to prove, by numerous illustrations, the general prevalence, in ancient times, of a belief that some prophetic power attended the last hours of existence. He began by referring to holy writ, quoting the passage from the Pentateuch, where it is said that "when Jacob had made an end of commanding his sons, he drew up his feet into the bed, and yielded up the ghost." The former part of this passage Sir Henry thought might be more faithfully rendered, "when Jacob had finished imparting his solemn injunctions to his sons,"—injunctions with which were mixed up much prophetic matter. And although the learned President believed the narrative of Moses to have been guided by the light of inspiration, and therefore not to be humiliated by being compared even with the sublime description of disease to which he alluded, still, he observed, it was remarkable that the Deity should think fit to choose the dying hour of the patriarch in which to enlighten his mind as to his gracious purposes for the future.

The fame of Jacob's prophecy, as well as of those of Isaiah, extended far beyond the limits of the country in which they were made; and the learned President deemed it probable that they had spread over the whole of the Roman Empire, by the authority of the Sybilline leaves. The general belief which attributed the gift of prophecy to the hour of death is alluded to by many, both of the Greek and Roman authors; and among others, Cicero, no less distinguished as an orator than as a philosopher, in his first book *De Diviniatione*, mentions that the death of Alexander the Great had been predicted by an Indian about to die on the pile. In the sixteenth book of the Iliad, Patroclus foretels the death of Hector; while Hector, in his last moments, prophesies the fall of Achilles by the hand of Paris.

---

* See this Journal, vol. ii. page 421.

The same idea of prophetic power is seen in Virgil, who makes Orodes (10th book of Æneid) predict the death of Mezentius, by whom he had just been mortally wounded.

> "Non me, quicunque es, inulto,
> Victor, nec longum lætabere: te quoque fata
> Prospectant paria, atque eadem mox arva tenebis."

So, also, Shakspeare, when Hotspur falls in the conflict with Harry Monmouth—

> "Oh! I could prophesy,
> But that the earthy and cold hand of death
> Lies on my tongue."

In Richard the 2d, too, we find John of Gaunt, when dying, exclaim—

> "Methinks I am a prophet new inspired."

The author concluded in these words:—"I have extended this speculative part of my paper to too great a length; not that I dread the reproach of those among you who delight to mix the elegances of literature with the severer studies of your profession; nor do I fear the disapprobation of others who are intent only on acquiring a knowledge of physic: they will surely thank me for having laid before them so faithful, so beautiful an historian of disease as Aretæus."

III.

*Case of Croup in which the Anti-spasmodic Treatment was adopted.**

By John Ware, M.D.

I should not have thought it worth while to call the attention of the readers of this Journal to the following case, standing, as it would have done, alone, had it not been for the resemblance of the treatment adopted to that proposed in an article by Mr. Kemble, contained in the number for February 23d.

The subject of it was a female child, of 19 months old, who had been affected for some months by a cutaneous disease, for which it had taken a variety of remedies; and, in consequence, her strength had been somewhat reduced. The affection of the skin had almost entirely disappeared, and the child, though thinner and paler than usual, was still tolerably well. On Thursday, Feb. 11th, I visited it, as I supposed for the last time, on account of the eruption, and found it laboring under a hoarse cold, for the management of which I gave its mother some directions. On Sunday, Feb. 14th, I was again called to it, and found, that, instead of improving, it had continued to grow more sick since my seeing it,—that, though tolerably well through the day, and only troubled with an occasional hard cough, yet every night it became stuffed and hoarse, and breathed with difficulty. It had not, at the time of my visit, the confirmed breathing of croup, but the cough was very well marked. I gave the following emetic :—

---

* This history, which, in connection with the article it alludes to, encourages the hope that the new treatment of croup may diminish the mortality of that disease, is recommended to the careful perusal of every practitioner of the healing art.—Ed.

R. Hyd. Subsulph. gr. vi.
Hyd. Submur. gr. xvi.
Pulv. Ipecac. gr. xij. M. div. in chart. 8.

Two to be taken at once, and one to be taken every half hour till vomiting should be produced. Five powders were given, which produced very thorough vomiting, with copious evacuation and considerable relief. In the evening, during sleep, the breathing was tolerably easy, but had something of the peculiar sound of croup ; the cough the same. A powder, containing a grain and a half of calomel and three quarters of a grain of Dover's powder, was given every four hours through the night, and a teaspoonful of the Syrup of Seneka, with about fifteen drops of the wine of ipecacuanha, every second hour between.

15th.—Through the night the respiration was bad, and this morning vomiting was again produced by the same emetic with that given yesterday. Its operation was not, however, followed by the same relief. The respiration and cough were now clearly marked, and grew worse through the whole day. In the afternoon and evening, there seemed to be a considerable quantity of mucus present in the air passages, more than is usual in cases of croup, but the character of the cough and breathing was not altered in other respects. In short, the patient seemed this evening to have arrived at a stage of the disease, from which it has not often been my good fortune to see recovery take place. Accordingly, deeming it useless to vex her with remedies which might occasion uneasiness and suffering, and could probably do no good, I determined to administer a sufficient quantity of opium to diminish the distress of the disease, and take the chance which nature and such remedies as I could combine with the opium would afford. A grain of Dover's powder, with two grains of calomel, was given every two hours through the night, and, in the intervening hour, a teaspoonful of the Syr. Althæa ʒ i., with four grains of alum.

16th.—There was less mucus in the lungs ; the respiration was more dry. The cough had the same decided sound, but the distress of breathing was less. The medicines were continued. In the forenoon the breathing became much worse, and continued so through the greater part of the day, with intervals of ease. But, on the whole, the aspect of the patient was such as to lead me to apprehend a fatal termination within twelve or twenty-four hours.

17th.—Through the night she had been growing easier. The respiration had but slightly the croupy sound, and was not much labored. Cough remained the same as to sound, but was easier. Continued in a state of sleep or stupor the greater part of the time, but was capable of being roused from it. A grain and a half of Dover's powder, with half a grain of calomel, was continued every four hours, and a blister applied between the shoulders. In the course of the day the symptoms seemed to be considerably mitigated.

18th.—The respiration is easy, with but a slight degree of the sonorous sound of croup; the cough less marked and unfrequent; a constant disposition to vomit. The patient appears completely under the influence of opium, and, except it be roused, lies with its eyes half closed and rolled upward under the lid. Medicine continued through the day. In the evening, the stupor having increased, the opiate powders were omitted, and, as there had been no discharge from the bowels for two days, a dose of oil was given.

19th.—No particular difference, except an increase of the state of stupor. It is difficult to rouse her. The eyes, when opened, have a glazed appearance; the iris is widely dilated, and but slightly contracted by light. Respiration and cough continue improving. No discharge from the oil. A second dose was given, which produced one or two stools of a dark green slime.

20th.—After a quiet and easy sleep, she awoke brighter than yesterday, and had, during the day, a slight appetite. The cough still continues hoarse, and the respiration is dry and sometimes sonorous. Doses of one quarter of a grain of calomel and half a grain of Dover's powder were given every four hours.

For several days the cough continued to retain some resemblance to that of croup, and the dryness and sonorousness of the breathing diminished very gradually. It was, in fact, more than a fortnight before they entirely vanished. It is perhaps worthy of remark, that the bowels remained in a disordered state for a much longer time, and that the appetite returned much more slowly than is usual in children after acute diseases.

I recollect only one case of recovery from croup under circumstances which I considered as bad as those existing in this case: and I do not communicate it as intending myself, or wishing that others should, lay much stress on it. Had it not been for the publication of Mr. Kemble, I should have been induced to believe that a mistake had been made in the nature or the stage of the disease: and I do not intend to express a decided belief that this was not the case. Still, it seems to me that every instance of the kind, taken in connexion with the results which are stated to have followed in the practice of Mr. Kemble, is of some value as helping to enable us to settle the value of that practice.

Every physician will acknowledge that, if not subdued in its very first attack, croup is seldom treated with success; and many cases are met with, which, in spite of every remedy, and that too when they have been administered from the first moment, go on to a fatal termination with a steady and undeviating step. Now this method of treatment seems to have a fair claim to trial in those cases where there is no reasonable expectation from the ordinary methods. It has this further claim to a favorable attention,—that if it do no good, it at least does not annoy the patient, and renders the last moments of this most horrible of diseases less painful to the living, as well as to the dying.

Boston, *April*, 1830.'

BOSTON, TUESDAY, APRIL 13, 1830.

IMPORTANT DISCOVERY IN THE PHYSIOLOGY OF GENERATION.

AMONG the questions which have from time immemorial exercised the ingenuity of speculative physiologists, is that of the circumstances in the parent which determine the sex and constitutional peculiarities in the offspring. It was, as is well known, the belief of Galen, that the two ovaries and the corresponding sides of the uterus had distinct functions; the right being destined to the production of males, and the left to that of females. He even extended this idea to the secretion of the two testes, though he does not attempt the task of reconciling this portion of his theory to the first, or to facts which must have been known to him in regard to the offspring of individuals in whom the organ was single. As respects the distinct functions of the ovarian contents, nearly the same doctrine has been revived in modern times by a French author, who published a work on the subject about twenty years since, but whose effort to found a durable reputation on this basis has not proved successful. We have now before us an analysis of a work lately published, whose author —M. Girou de Busareingues, an agriculturalist in the south of France—has advanced a doctrine which, if new, entitles him to the credit of considerable ingenuity, and at any rate has been very industriously investigated. It contains two separate propositions:—1st, that, in animals of mature age and perfectly developed, the influence of the sexes on the external form *crosses* in generation, the male being most influenced by the mother and the female by the father; and 2d, that, in regard to the sex itself, the influence is direct, the strength of constitution of each of the parties tending respectively to the production of his or her own sex.

The first of these propositions is deduced from particular observations, the force of which cannot be exhibited in a condensed view;—the second, on the contrary, is based upon general results, many of which were obtained from direct experiment. The first remark made by M. Girou was, that, in his flocks and studs, those females who were below or above the prime of life, produced most females by having united with them very old males; while those in the most vigorous age produced offspring of their own sex, though united with young subjects. To ascertain whether a similar law had been noticed by others, M. Girou made inquiries of the neighboring agriculturalists, who assured him that they had constantly observed, when the male was young and the female robust, that the product of their union was male; while the contrary had as uniformly happened, when the conditions were reversed.

In order to put this matter to the test for the satisfaction of others as well as himself, M. Girou announced, in 1825, to the agricultural meeting of Severac, that a part of his flock, already marked, would give him, at the next *agnelage*, more females than males. The Society nominated two commissioners to ascertain the fact. Although the intentions of the author were in some respects frustrated, the proportion of the males to the females was 1000 : 1472.

At another meeting, M. Girou offered to effect the production of a majority of males or females in a given flock, at the choice of the Society: two members furnished each one for the experiment. One of the two was divided into two equal parts, but without reference to age or constitution. The first part, being supplied by very young rams, gave a product of 30 males and 76 females; in the second, for which were selected rams of four and five years, strong and vigorous, the result was 55 males and 31 females.

In the experiment with the second flock, more attention was paid to the other conditions already alluded to. The first section, composed of strong sheep of four or five years, was sent into rich pasturage, and visited by *agneaux antenois* (yearlings); it produced 15 males and 25 females. The second section, made up of feeble sheep under four and over five years, was placed in dry pasturage, and received two strong rams over three years: the result was 26 males and 14 females. In both experiments, it was remarked that the lambs produced by the young rams were equal in appearance to those in which the male parent was most vigorous.

The law which seems to be thus established of the direct influence of the parent on the sex of the offspring, is subject to an important modification arising from disease. When affected by the rot (la pourriture), the female produces most males; while those whose lungs are diseased have most females. M. Girou derives, from these facts, a confirmation of his general doctrine; but this inference is not very important, or altogether obvious.

The experiments made on horses were attended with results similar to those above stated. It happened to be most profitable to M. Girou that his mares should have more females than males. With a view to this effect, he took care, in the year 1824, to furnish them pasturage, and to give none to foal who had borne the same year and suckled the year preceding; "elles ne furent presentées à l'étalon qu'apres qu'elles eurent donné des signes de chaleur." Five mares thus prepared produced five females, and of 15 foals obtained from 1824 to 1827, there were 13 males and 2 females; one of which last was produced under circumstances unfavorable to success. Similar results have been obtained elsewhere; and it has always been remarked, that the horses of the South, especially the Arabian, produce more females than males, when connected with females belonging to northern countries, who, from this circumstance, may be supposed to have been the most vigorous.

The other mammiferous animals—the bull, the hog and the dog—were found to be subject to the same law. With regard to the last race of animals, a fact has been related by that distinguished physiologist St. Hilaire, which, though it bears principally on the subject of superfetation, has also an important relation to the present theory. A bitch of Mt. St. Bernard, of a very large race, was united in succession to a dog almost as large as herself, and to a hound much more feeble; she had eleven young ones. These animals differed so much from each other, that it was difficult to believe that they could have proceeded from the same parent. Six resembled the hound, and five the larger dog; the latter were all males, and the former, on the contrary, were all females.—In our next, we propose to inform our readers how M. Girou succeeded in extending his observations to birds and insects, to plants and the human race.

PERFORATION OF THE STOMACH.

THAT perforation of the coats of the stomach may take place independently of the action of caustic or irritant substances, and even by a process so slow as scarcely to produce any marked symptoms during life, is abundantly proved by recent observation; and it has become an important object to distinguish cases in which this effect has been produced thus gradually, from those in which it has resulted from the administration of poisonous substances. According to Dr. Christison, of Edinburgh, a distinguished writer on toxicology, the diagnosis may be made with nearly absolute certainty.

If a person to whom a caustic poison has been administered dies very quickly, so that no considerable action is exerted on the coats of the stomach, the poison will be found within the organ. If, on the other hand, it has made its way through by ulceration, the deep vascularity or black extravasation around the orifice, will at once distinguish the occurrence from spontaneous perforation,—the latter being never attended with any considerable vascularity, and often marked by an *unusual whiteness* of the parts affected.

CURE FOR HOOPING COUGH.

DR. KAHLEISS, who published, in 1827, a memoir on the efficacy of a combination of belladonna, ipecacuanha and sulphur, which he had employed with the greatest success in the treatment of this disease, has lately produced another on the same subject, containing a number of new facts which go to confirm his previous views. The proportions in which Dr. R. employs the articles alluded to, will be seen from the following formula:—

R. Rad. Belladon. Pulv. gr. iv.
Pulv. Dover. gr. x.
Flor. Sulph. ℈iv.
Sac. Alb. Pulv. ʒii.. M. div in ch. iv.

One powder may be given every three hours to a child two years old. Between the doses is given a teaspoonful of the following mixture:—

R. Infus. Anthem. Nob. ℥i.
Syrup. Simp. ʒij.
Acid Pruss. Vauquelin, gtt. xij. M.

These proportions may, of course, be varied according to the age and constitution of the patient.

In conclusion, the author observes that the effect of the treatment is not always observable for the first four or five days; but, after this time, they are always evident, and, in general, at the expiration of from eight to twelve days the cure is complete. In some instances there have appeared, on the third or fourth day, a red efflorescence on the skin, and a dilatation of the pupils. In such cases, the exhibition of the medicine must be discontinued for twenty-four or thirty-six hours, and the proportion of the belladonna be diminished.

SCIENTIFIC MINUTENESS.

The celebrated French naturalist, Cuvier, has dissected an insect not an inch long, in which he reckons *four hundred and ninety four* muscles, connected with four hundred and ninety-four pairs of nerves, and *forty thousand* antennæ!

N. Y. Med. Inq.

Red Ink.—The most brilliant and permanent red ink that can be made, is as follows:—Take a small quantity of the best carmine, about the size of a pea, and put it into a small phial, with a little spirits of hartshorn, to dissolve it; when dissolved, put as much pure water in it as will give it the shade wanted; keep the cork out of the phial some time, to let the spirits of hartshorn evaporate; when it is ready for use. Bad carmine should not be used, because it has a sediment of vermilion, and cannot be dissolved, which renders it unfit to be used in a pen.—***Ib.***

Fire.—It must be familiar to many observers, that the rays of the sun, falling on a fire, put it out. This is accounted for by a writer in a foreign journal, saying: "That it is well known that a fire will not burn without air, and also that heat rarefies the air. Now the sun's heat, combined with that of the fire, will rarefy the air to such a degree that the fire will go out, because the air is not sufficiently dense to make it burn."—***Ib.***

To Correspondents.—The case of Hermaphrodism is interesting, but the description not sufficiently minute for a medical Journal. If our friend will have the goodness, at another examination, to make a more thorough description, and allow us to combine the result with what is already on our table, his history will be highly acceptable.

The remarks of our anatomical correspondent are wholly inadmissible.

An anonymous letter respecting the M'Lean Asylum has been received by the Editor, and as it contains statements not generally known, and which, to have their due weight, should come from some good *authority*, the writer is requested to append his name to the communication. We shall then insert it with more pleasure.

WEEKLY REPORT OF DEATHS IN BOSTON, ENDING MARCH 26.

Date.	Sex.	Age.	Disease.
March 20.	M.	20 yrs	consumption
	F.	6 1-2	lung fever
	F.	3 w	unknown
	F.	33 yrs	consumption
22.	M.	35	fever
	M.	72	old age
23.	M.	38	consumption
24.	F.	25 yrs	childbed
25.	M.	29	lung fever
	F.	30	consumption
	F.	2	dropsy on the brain
	F.	44	inflammation on lungs
	F.	24	consumption
26.	F.	45	unknown

Males, 5,—Females, 9. Total, 14.

ADVERTISEMENTS.

SUPERIOR STETHOSCOPE.

CARTER & HENDEE have constantly on hand, Stethoscopes of the most approved form, manufactured by George Wheelwright.

They also publish a Manual for the Use of the Stethoscope. A short Treatise on the different Methods of investigating the Diseases of the Chest. Translated from the French of M. Collin by W. N. Ryland, M.D., from the third London edition: with plates and an explanatory introduction, by a Fellow of the Massachusetts Medical Society.

April 6.

MEMORIA MEDICA.

THIS day published by CARTER & HENDEE, corner of Washington and School Streets, Memoria Medica,—a Medical Common-place Book,—with an alphabetical Index of the most common terms occurring in practice. Carefully selected and arranged by a Fellow of the Massachusetts Medical Society.

From Dr. James Jackson, Professor of the Theory and Practice of Medicine in Harvard University.

Gentlemen,—I have examined the "Memoria Medica" which you sent to me. I think the plan of it very excellent, and that it will be found highly useful to practitioners and students of medicine. I have never believed that a voluminous common-place book can be very beneficial to any man, unless he means to become an author. But on the other hand, every one will find an advantage in keeping a common-place book in which he may notice the detached facts which come under his notice, and which are likely soon to be lost from his memory. The book you have prepared will be found well adapted for this purpose by medical men, and will be more likely to be used by those who procure it than a common blank book, because all the labor of arrangement is saved.

I am, gentlemen, your obedient servant,
JAMES JACKSON.

From Dr. Walter Channing, Professor of Obstetrics and Medical Jurisprudence in Harvard University.

I have examined the Medical Common-place Book which was left with your note this evening, and with pleasure offer you my thanks for the publication of so useful a volume. Every practitioner of medicine will agree with the remarks in the preface on the inconveniences and absolute loss of what is very useful, which result from depending solely on the memory. Not unfrequently it happens that some particular prescription is peculiarly suited to an individual. Some time passes, and an occasion again arises in which we believe that the same medicine might be equally beneficial; what it was, however, has wholly escaped us; and though something else may be equally useful, still some regret may be felt, at least by the patient, that what has been found beneficial cannot again be at once resorted to. Some object to an artificial method of preserving, for such and other uses, what may be safely trusted to the memory, if that faculty be faithfully cultivated. I am willing to admit that there is force in this objection; but it is a simple question of fact only we have to consider. If it be true that there is much lost to the individual, and certainly much more to the profession, by trusting entirely to the memory, the occasional use of the Common-place Book for the preservation of what is truly valuable, has all the recommendation it needs. For such purposes, viz., for the registering of cases the most rare, and the frequent, if important, epidemics, prescriptions, &c., your *Memoria Medica* promises to be very useful; and for these it well deserves to be recommended to physicians. Students attending hospital practice will find it very valuable. Its tables of names are very full, and under references very easy. I cannot but hope it will get into general use.

Yours, &c., W. CHANNING.

Dec. 8.

AN ENGRAVING,

REPRESENTING the Perfect and Imperfect Cow Pox and the Chicken Pox, during their course, by J. D. Fisher, M.D. This day published and for sale by CARTER & HENDEE, cor. of Washington and School sts. Price 62 1-2 cts.

Jan 26.

Published weekly, by JOHN COTTON, at 184, Washington St. corner of Franklin St., to whom all communications must be addressed, *postpaid.*—Price three dollars per annum, if paid in advance, three dollars and a half if not paid within three months, and four dollars if not paid within the year. The postage for this is the same as for other newspapers.